



Wood Stove Change-Out Program

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Background Information

- High use of home wood burning devices
- Winter inversions with high PM_{2.5} levels
- Nonattainment with new daily PM_{2.5} standard
- Ecology received \$500,000 to fund a voluntary wood stove change-out program

Program Design

- Designed to get the biggest bang for the buck
- Ecology provided grants to local air agencies and Ecology regions

Program Requirements

- Programs must be located in residential areas with air monitoring data
- Funds must be used to replace uncertified devices only
- Replacement devices must meet WA State emission requirements

Program Requirements (cont'd.)

- New devices may be:
 - ❖ certified wood stoves
 - ❖ fireplace inserts
 - ❖ pellet stoves
 - ❖ gas, electric, or oil devices
- New devices must be professionally installed

Program Requirements (cont'd.)

- Only installed devices are eligible for replacement
- The existing wood stove/fireplace insert must be destroyed and/or recycled for metal
- Must conduct a post change-out survey

Project Evaluation Criteria

- Many days with $\text{PM}_{2.5}$ greater than 20 ug/m^3 during home heating season
- Leverages other funding
- Replaces wood stoves/fireplace inserts that are most heavily used

Project Evaluation Criteria (cont'd)

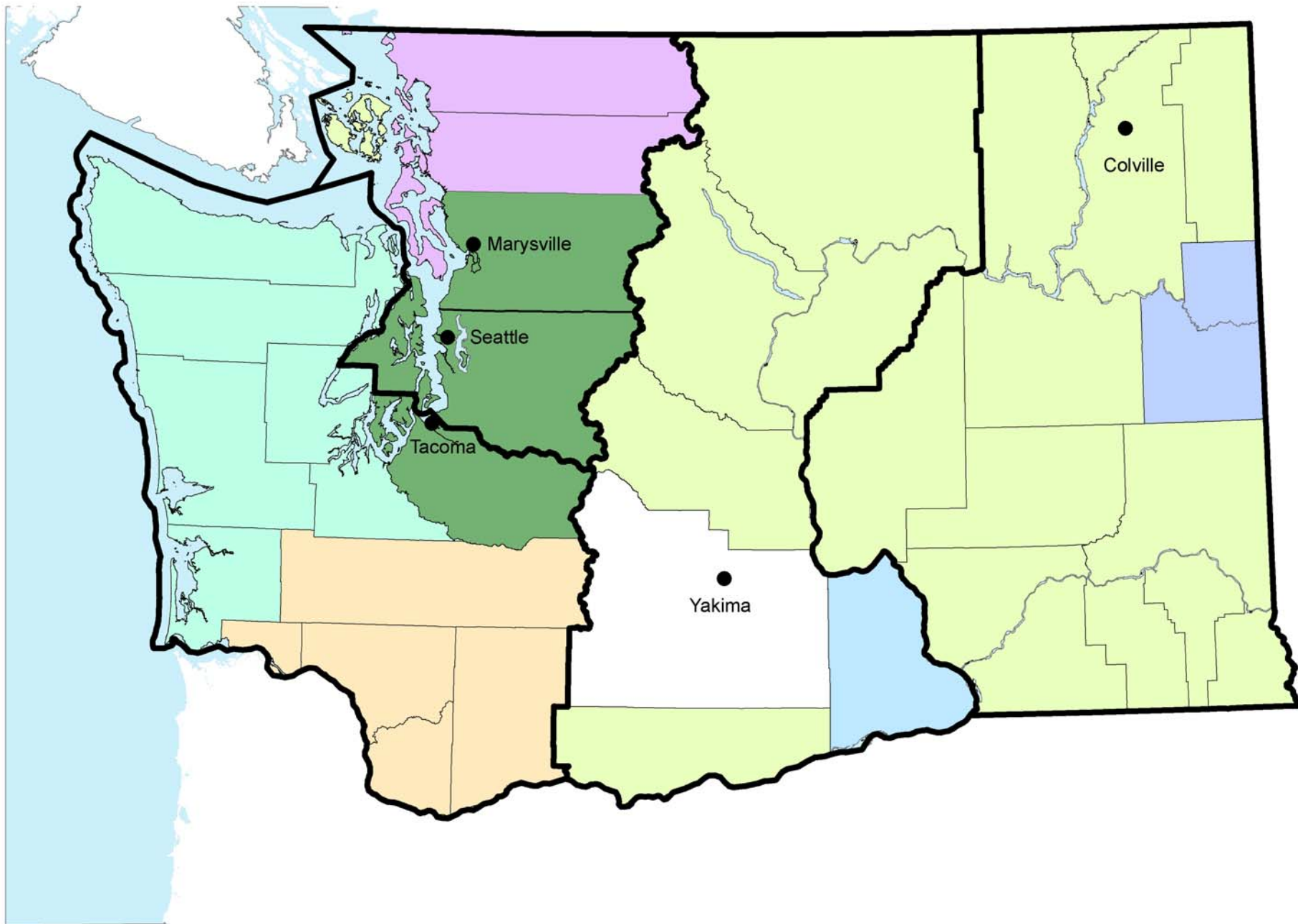
- Innovative, effective, or creative ways to ensure high rates of:
 - ❖ participation
 - ❖ education
 - ❖ getting change-outs done quickly
- Rapid disbursement of grant funds

Project Evaluation Criteria (cont'd)

- Clear and useful measures of program effectiveness
- Potential for high percentage of change-outs
- Consumer education about emissions, air quality, and proper use of stoves

Projects Applications and Funding

- Received 8 applications
- Funded 4 projects:
 - ❖ Tacoma area (Puget Sound Clean Air Agency)
 - ❖ Yakima (Yakima Regional Clean Air Authority)
 - ❖ Colville (Ecology Eastern Regional Office)
 - ❖ Marysville (Puget Sound Clean Air Agency)



Tacoma Area Project

- Focused on Tacoma and adjacent Urban Growth Areas
- Funded the grant at \$175,000
- ~182 change-outs
- Estimate \$85,000 matching funds from partners

Tacoma Area Project (cont'd)

- Partners include:
 - ❖ American Lung Association of Washington
 - ❖ NWHPBA
 - ❖ Pierce County
 - ❖ Puget Sound Energy
 - ❖ City of Tacoma
 - ❖ Tacoma Public Utilities
 - ❖ Tacoma-Pierce County Public Health

Tacoma Area Project (cont'd)

- Incentives:

- ❖ \$500 for pellet stove

- ❖ \$750 for gas/propane/electric device

- ❖ PSCAA-funded incentives

- \$200 for other Washington-approved wood burning devices

- \$400 for certain high-performing wood burning devices

Tacoma Area Project (cont'd)

- Incentives (cont'd):
 - ❖ Up to \$2500 for qualifying low-income households
 - ❖ Puget Sound Energy and Tacoma Public Utilities are offering additional incentives

Yakima Area Project

- Focused on Yakima, Selah, and Union Gap (approximately the former PM₁₀ nonattainment area)
- Funded the grant at \$175,000
- 97-130 change-outs

Yakima Area Project (cont'd)

- Estimate \$100,000 matching funds from partners
- Landlord-tenant heating device agreements for rental properties

Yakima Area Project (cont'd)

- Partners include:
 - ❖ American Lung Association of Washington
 - ❖ Cascade Natural Gas
 - ❖ Cascade Productions
 - ❖ Environment Canada
 - ❖ NWHPBA
 - ❖ Yakima County Community Services
 - ❖ landlords' association
 - ❖ 2 low-income weatherization organizations
 - ❖ 2 recyclers
 - ❖ 3 furnace retailers, 3 hearth product retailers
 - ❖ 6 propane providers

Yakima Area Project (cont'd)

- Incentives:

- ❖ Up to \$3,000 per installed device for qualifying low-income households
- ❖ Cascade Natural Gas, National Propane Gas Association, hearth product retailers, and local propane dealers are offering additional incentives

Colville Project

- Focused on city limits
- Changed to zip code to increase participation and respond to public interest
- Funded the grant at \$79,500
- ~ 75 change-outs
- Estimate \$27,750 matching funds from partners

Colville Project (cont'd)

- Partners include:
 - ❖ American Lung Association of Washington
 - ❖ City of Colville
 - ❖ Stevens County Public Works
 - ❖ Tri-County Health District
 - ❖ 1 low-income weatherization organization
 - ❖ 1 hearth product manufacturer
 - ❖ 4 hearth product retailers

Colville Project (cont'd)

- Incentives:
 - ❖ \$500 for certified wood stove
 - ❖ \$600 for pellet stove
 - ❖ \$750 for gas or propane device
 - ❖ No cost to qualifying low-income households
 - ❖ Retailers are also offering additional incentives

Marysville Project

- Focused on Marysville city limits
- Funded the grant at \$44,000
- ~ 95 change-outs
- Estimate \$68,500 matching funds from partners

Marysville Project (cont'd)

- Partners include:
 - ❖ American Lung Association of Washington
 - ❖ City of Marysville
 - ❖ NWHPBA
 - ❖ Puget Sound Energy
 - ❖ Snohomish County Public Utilities

Marysville Project (cont'd)

- Incentives:

- ❖ \$400 for certain high-performing wood burning devices

- ❖ \$500 for pellet stove

- ❖ \$750 for gas/propane/electric device

Marysville Project (cont'd)

- Incentives (cont'd):
 - ❖ PSCAA is funding \$200 for other Washington- approved wood burning devices
 - ❖ Puget Sound Energy and Snohomish Public Utilities are offering additional incentives

Lessons Learned

- Private low-income organizations are willing to partner on change-outs
- Working with government-funded low-income programs takes time (about 2 months total)
- Establishing partnerships takes longer than expected

Lessons Learned (cont'd)

- Administrative costs are higher than expected
- Projects take longer than expected to gather momentum

The Future

- Ecology will be asking for funds for a long-term change-out program
- Ecology is calculating emission reductions based on change-outs to show program effectiveness
- Ecology is hiring a wood stove coordinator

The Future (cont'd)

- Anecdotal information from the post change-out survey will be used to:
 - ❖ Develop education and outreach materials for the public
 - ❖ Show elected officials positive impacts of the program